What is claimed:

1. A servo demodulation system, comprising:

a first servo demodulator adapted to search for a servo address mark (SAM) pattern using a first set of servo demodulation detection parameters; and

a second servo demodulator adapted to search for the SAM pattern using a second set of servo demodulation parameters, wherein at least one servo demodulation parameter in the second set is different than a corresponding parameter in the first set.

2. The system of claim 1, wherein the first set of servo demodulation detection parameters includes a starting automatic gain control (AGC) value that is different than a starting AGC value in the second set.

3. The system of claim 1, wherein the first set of servo demodulation detection parameters includes a starting phase lock loop (PLL) value that is different than a starting PLL value in the second set.

4. The system of claim 1, wherein the first set of servo demodulation detection parameters includes an automatic gain control (AGC) update value that is different than an AGC update value in the second set.

5. The system of claim 1, wherein the first set of servo demodulation detection parameters includes a phase lock loop (PLL) update value that is different than a PLL update value in the second set.

6. The system of claim 1, wherein the first set of servo demodulation detection parameters includes a bit-detection threshold that is different than a bit-detection threshold in the second set.

7. The system of claim 1, wherein the first set of servo demodulation detection parameters includes a SAM confidence threshold that is different than a SAM confidence threshold in the second set.

8. The system of claim 1, wherein the first set of servo demodulation detection parameters includes at least one finite impulse response (FIR) filter coefficient that is different than a corresponding FIR filter coefficient in the second set.

9. The system of claim 1, wherein the first set of servo demodulation detection parameters includes a starting automatic gain control (AGC) value and a starting phase lock loop (PLL) value that is different than a starting AGC value and a starting PLL value in the second set.

10. The system of claim 1, wherein:

the first servo demodulator is further adapted to determine at least one actual servo demodulation value corresponding to a detection of the SAM pattern; and

the second servo demodulator is further adapted to determine at least one actual servo demodulation value corresponding to a detection of the SAM pattern,

wherein at least one actual servo demodulation value, produced by one of the first and second servo demodulators that detects the SAM pattern, is selected and used for servo control.

11. The system of claim 1, wherein:

the first servo demodulator is further adapted to determine at least one actual servo demodulation value corresponding to a detection of the SAM pattern; and

the second servo demodulator is further adapted to determine at least one actual servo demodulation value corresponding to a detection of the SAM pattern,

the system further comprising:

a microprocessor adapted to characterize each detection of the SAM pattern as a good SAM detection or a bad SAM detection based at least in part on a comparison between at least one predicted servo demodulation value and a corresponding at least one actual servo demodulation value.

12. The system of claim 11, wherein if detection of the SAM pattern by one of the first and second servo demodulators is characterized as a good SAM detection for a servo wedge, then an actual servo demodulation value, determined by the one of the first and second servo demodulators that produced the good SAM detection, is used for servo control.

13. The system of claim 11, wherein the microprocessor is further adapted to select a best good SAM detection, if a detection of the SAM pattern by the first servo demodulator and a detection of the SAM pattern by the second servo demodulator are both characterized as a good SAM detection for a servo wedge.

14. The system of claim 13, wherein if a detection of the SAM pattern by the first servo demodulator

and a detection of the SAM pattern by the second servo demodulator are both characterized as a good SAM detection for a servo wedge, then an actual servo demodulation value, determined by the one of the first and second servo demodulators that produced the best good SAM detection, is used for servo control.

15. A system of claim 1, wherein the first and second servo demodulators search for the SAM pattern in servo wedges that are zone bit recorded.

16. A servo demodulation system for use with a disk having zone bit recorded servo wedges, comprising:

a first servo demodulator adapted to search for a servo address mark (SAM) pattern, within a servo wedge, using a first set of servo demodulation detection parameters, the first set including a first nominal frequency useful for searching for the SAM pattern if the servo wedge is within a first zone; and

a second servo demodulator adapted to:

search for the SAM pattern, within the same servo wedge, using a second set of servo demodulation detection parameters when the servo wedge is near a boundary between the first zone and a second zone, the second set including a second nominal frequency useful for searching for the SAM pattern if the servo wedge is within the second zone; and

search for the SAM pattern, within the same servo wedge, using a third set of servo demodulation detection parameters when there is a high confidence that the servo wedge is within the first zone, the third set including the first nominal frequency useful for searching for the SAM pattern if the servo wedge is within a within the first zone, wherein at least one servo demodulation

parameter in the third set is different than a corresponding parameter in the first set.

17. The system of claim 16, wherein:

the first servo demodulator is further adapted to determine at least one actual servo demodulation value corresponding to a detection of the SAM pattern; and

the second servo demodulator is further adapted to determine at least one actual servo demodulation value corresponding to a detection of the SAM pattern,

the system further comprising:

a microprocessor adapted to characterize each detection of the SAM pattern as a good SAM detection or a bad SAM detection based at least in part on a comparison between at least one predicted servo demodulation value and a corresponding at least one actual servo demodulation value.

18. The system of claim 17, wherein if detection of the SAM pattern by one of the first and second servo demodulators is characterized as a good SAM detection for a servo wedge, then an actual servo demodulation value, determined by the one of the first and second servo demodulators that produced the good SAM detection, is used for servo control.

19. The system of claim 17, wherein the microprocessor is further adapted to select a best good SAM detection, if a detection of the SAM pattern by the first servo demodulator and a detection of the SAM pattern by the second servo demodulator are both characterized as a good SAM detection for a servo wedge.

20. The system of claim 19, wherein if a detection of the SAM pattern by the first servo demodulator and a detection of the SAM pattern by the second servo demodulator are both characterized as a good SAM detection for a servo wedge, then an actual servo demodulation value, determined by the one of the first and second servo demodulators that produced the best good SAM detection, is used for servo control.

21. The system of claim 16, wherein when there is a high confidence that the servo wedge is within the first zone, at least one of the following servo demodulation parameters is different in the third set than a corresponding parameter in the first set:

a starting automatic gain control (AGC) value;

a starting phase lock loop (PLL) value;

an automatic gain control (AGC) update value;

a phase lock loop (PLL) update value;

a bit-detection threshold;

a SAM confidence threshold; and

a finite impulse response (FIR) filter coefficient.

22. The system of claim 16, wherein:

the first servo demodulator is further adapted to determine at least one actual servo demodulation value corresponding to a detection of the SAM pattern; and

the second servo demodulator is further adapted to determine at least one actual servo

demodulation value corresponding to a detection of the SAM pattern,

wherein at least one actual servo demodulation value, produced by one of the first and second servo demodulators that detects the SAM pattern, is selected and used for servo control.